

AMENDMENTS TO THE SPECIFICATION

[0023] ~~FIG. 9(a) shows~~ FIGS. 9A and 9B show the first embodiment of the present invention, with ~~and FIG. 9(b)~~ the tray in the closed position, and the roller shelf stowed in the cabinet;

[0042] The Roller Shelf Configuration is depicted in FIGS. 3 through 8. ~~This embodiment~~ In this embodiment, the storage unit is a cabinet 1 and uses a tray 4 to hold the batteries B. Tray 4 sits on rollers 5, which are mounted to the inner bottom surface 1c of the cabinet 1 beneath the tray 4. Side walls 6a of a roller shelf assembly 6 are provided with hooks 6b for attaching to shoulders 9a of the cabinet opening 9. To remove the batteries B, the roller shelf assembly 6 is first attached to the cabinet 1, and then the tray 4 is rolled out. The roller shelf 6 can be designed to allow the tray 4 to slide out to nearly any desired distance, even beyond full extension. An important feature of this configuration is that one roller shelf 6 can be used for multiple trays 4 in multiple cabinets 1.

[0044] The following enhancements may be applied to the storage unit with the Roller Shelf Configuration embodiment:

The roller shelf 6 may be flipped over and stored above the batteries B as shown in ~~FIG. 9~~ FIGS. 9A and 9B. In this arrangement, the shelf 6 can be stored very compactly in the storage unit. In addition, the roller shelf 6 in this stowed position can hold down the batteries B in earthquake prone areas.

· The roller shelf 6 may be free standing or attached to the cabinet 1 on one side of the roller shelf 6 and supported with legs 6d on the other end of the roller shelf 6. See Fig. 11.

· The roller shelf 6 may be part of the door 10 of the battery compartment 1b, so that when the door is opened, it hinges down on pivot shaft 11 into the working position. See FIG. 10.

· The roller shelf 6 can be replaced with two or more separate bracket assemblies 6c1, 6c2 that have rollers 5. As compared with the roller shelf 6 shown in FIG. 4(a), the two bracket assemblies 6c1, 6c2 shown FIG 4(b) are mounted at the opening of the storage unit. The bracket assemblies 6c1, 6c2 may be used together, in a manner similar to a single roller shelf, or separately, depending on the configuration of the trays 4 in the storage unit.

· The roller shelf configuration may include an interlock 8 to prevent the tray 4 from sliding prior to attaching the shelf 6. See FIG. 6.

· When used in a storage unit with openings on two sides, the roller shelf configuration can allow bi-directional travel of the tray 4. See FIG. 11.

· The storage unit with the Roller Shelf Configuration may have a variety of configurations, such as the cabinet 1, shown in the figures, or alternatively may be a rack having a frame with open sides, as typically used to house electrical, computer, and telecommunications equipment, cabling, and the like.

[0045] The storage unit with the Roller Shelf Configuration has numerous advantages over drawer designs of the background art, including:

Reduced Cost: The roller components 5 (typically plastic rollers, stainless steel shoulder bolts or pins, and sheet metal brackets) are considerably less expensive than corrosion resistant heavy duty full extension slides. In addition, since the battery weight is distributed over multiple rollers 5, the tray 4 requires minimal strength, even for a large ~~size~~, size tray with a large weight capacity, and ~~when~~ the storage unit can be designed to be earthquake resistant. In the minimum configuration, the tray 4 is simply a flat plate without any sides ~~sides-4a~~. This means the tray 4 is less expensive than the comparable drawer 2 that is typically used with conventional slides 3, which requires reinforcement to transfer the load to the sides of the drawer 2 and to prevent excessive sagging. Additional cost savings are achieved if the roller shelf 6 is shared with many trays 4 and multiple storage units.

Longer Travel: The Roller Shelf Configuration can allow the tray 4 to slide out well beyond full extension with little additional cost. Three (3) member slides can go only slightly beyond full extension. Additional travel in a cabinet 1 with conventional drawers 2 would require considerably more expensive slides with four (4) or more members.

Reduced Width: The Roller Shelf Configuration requires less width. (No space is required for slides.)

Reduced Height: The Roller Shelf Configuration requires less height in some configurations. This occurs when the rollers 5 can be recessed into the cabinet 1 so that the entire battery compartment opening 9 can be used by the tray 4 and batteries B. Since there is no need for additional reinforcement at the bottom of the tray 4, the overall height of the battery

Application No. 10/651,041
Amendment dated October 31, 2005
Reply to Office Action of September 29, 2005

Docket No.: 4799-0119P
Art Unit 3637
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compartment 1b can be reduced as compared to a drawer 2 in accordance with the background art.